

Source Water Assessment Report



Public Water Supply: NATIONWIDE ESTATES MHP

**Assessment Areas Include:
636**



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Reports were generated with the Automated Source Water Assessment Tool (ASWAT). Assessments were completed online using ASWAT by hundreds of state employees, public water supply staff, and technical assistant providers throughout the State of Kansas.

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Report Description

Detailed Explanation of Entire Report:

The 1996 amendments to the Safe Drinking Water Act require each state to develop a Source Water Assessment Program (SWAP) and a Source Water Assessment (SWA) for each Public Water Supply (PWS) that treats and distributes raw source water. In Kansas there are 761 public water supplies that require SWAs. A SWA includes a delineation of the source water assessment area, an inventory of potential contaminant sources, and a susceptibility analysis.

A PWS can consist of one or more individual assessment areas that require different assessments. In general, an assessment area is delineated at a two-mile fixed radius for a groundwater well. A surface water intake assessment area is the upstream-drainage area (watershed), inside the state border. Additionally, an assessment area can consist of an individual well, group of wells, an individual surface water intake, or multiple surface water intakes.

After each assessment is completed a report is automatically generated using an Internet-based application called the Automated Source Water Assessment Tool (ASWAT). The individual assessment reports combine to form the entire SWA report for a PWS.

A map of each Assessment Area was also generated with ASWAT. However, for security reasons the maps are not included in this report. To obtain a copy of the map(s), please contact your local PWS.

All PWS reports will be available for viewing and downloading on KDHE's Watershed Management Section website(<http://www.kdhe.state.ks.us/nps>) in 2004.

NATIONWIDE ESTATES MHP Summary:

AA	Type	Diversion Id
636	Ground water multiple wells	001, 002

Public Water Supply: **NATIONWIDE ESTATES MHP**
Assessment Area: **636**
Diversion Id's: **001, 002**
Status: **Accepted**
Submit Date: **2003-01-30 10:50:15**

Executive Summary:

The Executive Summary gives the assessment area's Susceptibility Likelihood Score (SLS) for each contaminant of concern category.

SLS indicates which contaminant category is most likely to impact a given public water supply. Contaminants of concern for groundwater include microbiological, inorganic compounds, nitrates, synthetic organic compounds, pesticides, and volatile organic compounds. Contaminants of concern for surface water include microbiological, inorganic compounds, eutrophication – phosphorus, sedimentation, synthetic organic compounds, pesticides, and volatile organic compounds.

To determine the assessment area's susceptibility to contamination, a qualitative (semi-quantitative) screening level susceptibility analysis was designed that utilizes general assumptions and best professional judgement. It is a systematic procedure comprised of simple yes/no questions. Each question in the susceptibility analysis focuses on the presence or absence of potential pollution sources in the assessment area. SLS is most useful in helping the Public Water Supply (PWS) focus on water quality protection actions towards a contaminant category of concern. For example, if the SLS for microbiological contamination is high, relative to volatile organic compounds (VOC), water supply protection planners would conclude that the attention should be directed towards microbiological contaminant sources rather than VOC sources.

Executive Summary

Public Water Supply: **NATIONWIDE ESTATES MHP**

Assessment Area: **636**

Susceptibility Likelihood Scores for Assessment Area

Contaminant Category	A	B	B*	C	C*	D
Susceptibility Likelihood Score – SLS	60	63	64	64	62	63
SLS Range	Mid	Mid	Mid	Mid	Mid	Mid

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Susceptibility Likelihood Range

SLS Range	
0–50	Low Susceptibility
51–80	Moderate Susceptibility
81–100	High Susceptibility

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Potential Sources:

The Potential Sources section lists all the sites that have been identified as potential sources of contamination.

Potential sources of contamination may include land uses, industry, or businesses that could generate or store chemicals/substances that could potentially contaminate the water supply only if released into the environment. Both unregulated sites from business location databases and regulated sites from various KDHE databases were compiled. Additional sites could have been added by an evaluator through the assessment process to supplement the original data.

The 1987 Standard Industrial Classifications (SIC) were used to identify potential contaminate sites. The SIC system classifies establishments into industries on the basis of the primary activities of the establishment.

Each assessment area is delineated with 3 assessment zones. These zones can be used to get a general understanding of the potential influence sites have based on proximity to the water supply. Zone A is a 100-foot radius around a groundwater well and a 1000-foot radius around a surface water intake. Zone B is a 2000-foot radius around wells and a hydrological delineated buffer around the surface water sources. Zone C is a 2-mile radius around wells and the balance of the watershed for intakes. The potential sources listed in this section are sorted to show all the potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business is identified in the study as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

The data for the potential sources of contamination was compiled from May through August in 2002. Some of the databases used were incomplete datasets that are continually being updated. Due to the incompleteness, inaccuracies, and new development, it is possible that sources of potential contamination that are in the assessment area are not included in the report. Inaccurate locations could also cause sources to show up in the assessment area that are not actually in the assessment. Additionally, duplication between the datasets could cause sites to show up multiple times in the assessment area.

Potential Sources

Public Water Supply: **NATIONWIDE ESTATES MHP**
Assessment Area: **636**

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
207886	Animal Specialty Services	752	B
207841	Oil and Gas Field services	1389	B
207857	Farm and Garden Machinery	5083	B
207842	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	B
207067	Repair Services, Nec	7699	B
206464	Cattle Farm	211	C
206997	Veterinary Services, Specialties	742	C
207646	Veterinary Services, Specialties	742	C
207647	Veterinary Services, Specialties	742	C
206465	Animal Specialty Services	752	C
206916	Animal Specialty Services	752	C
206955	Animal Specialty Services	752	C
207684	Animal Specialty Services	752	C
206469	Oil and Gas Field services	1389	C
206470	Oil and Gas Field services	1389	C
206471	Oil and Gas Field services	1389	C
206472	Oil and Gas Field services	1389	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
206473	Oil and Gas Field services	1389	C
206474	Oil and Gas Field services	1389	C
206475	Oil and Gas Field services	1389	C
206897	Oil and Gas Field services	1389	C
207045	Oil and Gas Field services	1389	C
207142	Oil and Gas Field services	1389	C
207208	Oil and Gas Field services	1389	C
207256	Oil and Gas Field services	1389	C
207379	Oil and Gas Field services	1389	C
207380	Oil and Gas Field services	1389	C
207622	Oil and Gas Field services	1389	C
207639	Oil and Gas Field services	1389	C
207640	Oil and Gas Field services	1389	C
207845	Oil and Gas Field services	1389	C
207855	Oil and Gas Field services	1389	C
207901	Oil and Gas Field services	1389	C
206734	Single-family Housing Construction	1521	C
206881	Single-family Housing Construction	1521	C
207076	Single-family Housing Construction	1521	C
207115	Single-family Housing Construction	1521	C
207140	Single-family Housing Construction	1521	C
207162	Single-family Housing Construction	1521	C
207207	Single-family Housing Construction	1521	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
207232	Single-family Housing Construction	1521	C
207302	Single-family Housing Construction	1521	C
207367	Single-family Housing Construction	1521	C
207431	Single-family Housing Construction	1521	C
207505	Single-family Housing Construction	1521	C
207671	Single-family Housing Construction	1521	C
207677	Single-family Housing Construction	1521	C
207877	Single-family Housing Construction	1521	C
207902	Single-family Housing Construction	1521	C
207903	Single-family Housing Construction	1521	C
207206	Nonresidential Construction	1542	C
207583	Nonresidential Construction	1542	C
207678	Nonresidential Construction	1542	C
206476	Highway and Street Construction	1611	C
206477	Highway and Street Construction	1611	C
207289	Highway and Street Construction	1611	C
207371	Highway and Street Construction	1611	C
207668	Prepared Feeds For Animals and Fowls	2048	C
207537	Wood Kitchen Cabinets Manufacturing	2434	C
206485	Structural Wood members Manufacturing	2439	C
207736	Newspapers Publishing and Printing	2711	C
207731	Commercial Printing-Lithographic	2752	C
207164	Commercial Printing NEC	2759	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
207782	Commercial Printing NEC	2759	C
207792	Commercial Printing NEC	2759	C
207793	Commercial Printing NEC	2759	C
206850	Sheet Metal Work Manufacturing	3444	C
207107	Special Industries Machinery Manufacturing	3559	C
206489	Machinery, Except Electrical Manufacturing	3599	C
207634	Aircraft Equipment Manufacturing	3728	C
206858	Signs and Advertising Display Manufacturing	3993	C
206907	Manufacturing Industries, nec	3999	C
207263	Manufacturing Industries, nec	3999	C
206492	Local Trucking, without Storage	4212	C
206498	Combination Utility Services, nec	4939	C
207046	Refuse Systems	4953	C
207047	Refuse Systems	4953	C
207885	Refuse Systems	4953	C
207959	Refuse Systems	4953	C
207298	Farm and Garden Machinery	5083	C
206456	Gasoline Service Station	5541	C
206510	Gasoline Service Station	5541	C
206748	Gasoline Service Station	5541	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
207279	Gasoline Service Station	5541	C
207483	Gasoline Service Station	5541	C
207686	Gasoline Service Station	5541	C
207732	Gasoline Service Station	5541	C
207951	Recreational vehicle sales and repair	5561	C
207952	Recreational vehicle sales and repair	5561	C
206525	Mobile Home Park	6515	C
207288	Mobile Home Park	6515	C
207503	Mobile Home Park	6515	C
207633	Mobile Home Park	6515	C
207904	Mobile Home Park	6515	C
207157	Photofinishing Laboratory	7384	C
206729	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
207332	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
207569	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
207590	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
207629	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
207643	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
207673	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
206562	Auto Truck Repair Service	7538	C
206709	Auto Truck Repair Service	7538	C
206710	Auto Truck Repair Service	7538	C
206730	Auto Truck Repair Service	7538	C
206975	Auto Truck Repair Service	7538	C
207096	Auto Truck Repair Service	7538	C
207253	Auto Truck Repair Service	7538	C
207262	Auto Truck Repair Service	7538	C
207337	Auto Truck Repair Service	7538	C
207352	Auto Truck Repair Service	7538	C
207429	Auto Truck Repair Service	7538	C
207562	Auto Truck Repair Service	7538	C
207591	Auto Truck Repair Service	7538	C
207611	Auto Truck Repair Service	7538	C
207648	Auto Truck Repair Service	7538	C
206844	Car Wash	7542	C
206847	Car Wash	7542	C
207333	Car Wash	7542	C
207747	Car Wash	7542	C
206594	Repair Services, Nec	7699	C
206835	Repair Services, Nec	7699	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
206909	Repair Services, Nec	7699	C
207058	Repair Services, Nec	7699	C
207063	Repair Services, Nec	7699	C
207189	Repair Services, Nec	7699	C
207620	Repair Services, Nec	7699	C
207636	Repair Services, Nec	7699	C
207674	Repair Services, Nec	7699	C

Regulated Confined Animal Feeding Operations Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
2001226	Binder And Son Dairy	A-SHEL-M005	C
2002504	Ksu Agricultural Research Ctr.	A-SHEL-B001	C

Regulated Hazardous Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3001594	Ideal Trucking	26072	B

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3001604	Johnson Co, Executive Airport	26115	B
3002098	Us Supply	28561	B
3002426	Davis Mud	42358	B
3002852	Stewart Well Service	81700	B
3000146	Home Oil Supply	01737	C
3000253	Midland Marketing	03076	C
3000285	Frontier Quick Mart	03487	C
3000344	Allied Inc	04204	C
3000398	A A Coors	04941	C
3000415	Werth Tank Service	05077	C
3000514	Hays Medical Center, Hadley Campus	06173	C
3000531	Hays Medical Center, St Anthony	06258	C
3000548	Dons 66	06341	C
3000600	Mr Quick Mini Mart	06528	C
3000606	Allied Asphalt Inc	06548	C
3000644	Love's #44	06728	C
3000675	Coastal Mart #2501	06843	C
3000676	Coastal Mart #2502	06844	C
3000677	Coastal Mart #2504	06845	C
3000710	Asb Oil Inc	07026	C
3000847	Hays Fire Dept	08777	C
3000848	Hays, Parks Dept	08778	C
3000849	Hays, Service Dept	08779	C

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3000850	Hays Airport	08780	C
3000950	Art's Apco	11481	C
3000974	Brown's Service Center	12215	C
3001017	Haliburton	13507	C
3001023	Kansas Mobile Glass	13868	C
3001091	James Motor C0	15972	C
3001122	Leroy's Diamond Shamrock	17115	C
3001124	Kerr-mcgee #6295 ("al's")	17141	C
3001140	Karst Well Drilling	17679	C
3001200	Speedy Lube Oil	20216	C
3001203	Standish Ford, Inc.	20268	C
3001364	Fort Hays St Univ, Motor Pool	24183	C
3001391	Apco #641, Vine St	25028	C
3001423	Amoco #9533	25226	C
3001490	J C Penney	25574	C
3001537	Mr Quick #2	25793	C
3001590	Air Midwest, Hays	26061	C
3001603	Gilmore Construction	26114	C
3001680	Kmart #9067	26436	C
3001750	Kdot, Hays	26687	C
3001808	Army Reserve Center	27022	C
3001819	Ups, Hays	27053	C
3001864	Fort Hays Exp. Station	27256	C

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3001914	Kang	27458	C
3002124	Halliburton Serv	28713	C
3002169	Schlitter Service	28929	C
3002258	Apc0, Main St	29361	C
3002343	Thrift Distributors	29733	C
3002405	Midland Marketing Coop	40217	C
3002417	Janzen Oil – East Bulk	41536	C
3002625	Hutchison Vending Co	80813	C
3002645	Hays Asphalt Construction Inc.	81166	C
3002649	Midway Cable Tv Co.	81178	C
3002677	Rome, Ron Property	81261	C
3002745	Quality Cleaners	81409	C
3002748	Roth Electronics	81416	C
3002770	Thompson Oil Co	81464	C
3002776	M D Inc	81479	C
3002789	Ellis Co Emergency Management	81507	C
3002799	Circle S Trailer Sales Inc	81553	C
3002805	Sun Cement, Former	81583	C
3002876	Dowell Site, Former	81780	C

Regulated Identified Contaminated Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
7000885	CROSS MANUFACTURING CO., INC.	C602600014	B

Regulated Identified Contaminated Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
7000888	PERMIAN OIL	C602600037	B
7000896	MIDWEST ENERGY, INC.	C602603013	B
7000887	NORGE'S DRYCLEANERS	C602600034	C
7000892	WEST 8TH STREET (HAYS WELLS – 20,27,28)	C602603011	C
7000893	WEST 8TH STREET (HAYS WELLS – 20,27,28)	C602603011	C
7000894	WEST 8TH STREET (HAYS WELLS – 20,27,28)	C602603011	C
7000897	DOWELL–SCHLUMBERGER FACILITY (FORMER)	C602603014	C
7000900	CLARK'S WELL SITE	C602670625	C
7000901	AUTO HOUSE BODY SHOP DISPOSAL SITE	C602671101	C

Regulated Solid Waste Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
5000769	City of Hays	0747–S	B

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6000291	KDHE–SOUTH HAYS GROUNDWATER REMED.	I–SH16–PO06	B
6001723	HAYS WWTF	M–SH16–OO02	B
6001724	HAYS WWTF	M–SH16–OO02	B

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6000888	ROME CORPORATION / WESTERN WELL SERVICE	I-SH16-NP03	C
6000890	J.C. PENNEY COMPANY-HAYS	I-SH16-PO08	C
6000891	KDHE/BER (DRY CLEANING TRUST FUND) HAYS	I-SH16-PO10	C
6001726	HAYS WWTF	M-SH16-OO02	C
6001732	HAYS WWTF	M-SH16-OO02	C
6002028	A-1 PLANK SCAFFOLD MFG. INC.	P-SH16-OO02	C

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Added Sources:

The Added Sources section lists all the sites that have been added as potential sources of contamination by an evaluator through the assessment process to supplement the original data.

The potential sources listed in this section are sorted to show the added potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business was added as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

Added Sources

Public Water Supply: **NATIONWIDE ESTATES MHP**
Assessment Area: **636**

Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
9000650	football field	10073	B
9000648	oil and gas wells	1381	B
9000617	rural residence	1521	B
9000618	rural residence	1521	B
9000619	rural residence	1521	B
9000620	rural residence	1521	B
9000622	rural residence	1521	B
9000623	rural residence	1521	B
9000624	rural residence	1521	B
9000625	rural residence	1521	B
9000626	rural residence	1521	B
9000630	rural residence	1521	B
9000632	rural residence	1521	B
9000633	rural residence	1521	B
9000634	rural residence	1521	B
9000635	wastewater treatment facility	1521	B
9000647	underground gas oil pipelines	4600	B
9000651	Fuel, grain and feed and hay storage	10026	C
9000649	pastureland with stock cattle	10080	C
9000646	dryland wheat field	111	C

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Potential Contaminants Summary:

The Contaminants Summary shows the number of identified unregulated sources in the assessment area for each contaminant of concern category.

In order to obtain the number of sources for each category, a relationship was correlated between each Standard Industrial Classification (SIC) and the contaminant of concern categories. Each SIC was assessed and associated with contaminant categories. For example, if not managed properly, a car wash (SIC 7542) could potentially contaminate an intake because of inorganic compounds (IOC) and volatile organic compounds (VOC); thus, a car wash is associated with IOCs and VOCs.

A chart displays a count for each contaminant category. The sum for each category represents the total number of identified sources that have been associated with that particular contaminant category. However, the total number of identified sources does not include contaminants from the Added Sources. In our example, a car wash would be considered 2 sources of contamination. It would be a potential source of contamination for IOCs and for VOCs; thus, 1 would be added to the total number of sources in the VOC category and 1 would be added to the IOC category.

Potential Contaminants Summary

Public Water Supply: **NATIONWIDE ESTATES MHP**

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Number of Unregulated Site Sources Identified for each Contaminant Category

MicroBiological	Pesticides	IOC's	SOC's	VOC's	Nitrates
36	6	105	48	55	33

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

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Potential Contaminants Listing:

The Potential Contaminants section lists the contaminant of concern category associated with each Standard Industrial Classification (SIC) found in an assessment area. A complete list of contaminant category codes are located at the bottom of this page.

The relationships defined between the Standard Industrial Classifications (SIC) and the contaminant of concern categories are displayed in a table format. Using our car wash example, the relationships can be better illustrated. A car wash could release IOC and VOC chemical substances. The connection is shown by indicating the SIC, 7542, and the associated contaminant categories, IOC (Category B) and VOC (Category D). However, the contaminants listed are not associated with any Added Sources.

The list is sorted by the SIC source description and it only shows unique SIC sources. For example, an assessment area can have 20 car washes in an assessment area, but the list is only going to show contaminant categories associated with car washes onetime. This is because all car washes have the same SIC and every car wash poses the same potential threat to water intakes.

A – Microbiological	B – Inorganic Compounds	B1 – Eutrophication – Phosphorous
B2 – Sedimentation	B* – Nitrates	C – Synthetic Organic Compounds
C* – Pesticides	D – Volatile Organic Compounds	

Potential Contaminants Listing

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Unregulated Identified Site Sources and associated Potential Contaminant Category

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
3728	Aircraft Equipment Manufacturing	inorganics, VOCs	B
"	"	"	D
7538	Auto Truck Repair Service	Inorganics, VOCs	B
"	"	"	D
7542	Car Wash	Inorganics, VOCs	B
"	"	"	B1
"	"	"	B2
"	"	"	D
211	Cattle Farm	Sanitary, Fertilizers TSS, pesticides, Erosion and sedimentation	A
"	"	"	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C*
4939	Combination Utility Services, nec	Inorganics, VOCs	B
"	"	"	D
5541	Gasoline Service Station	Inorganics, VOCs	B

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
5541	Gasoline Service Station	Inorganics, VOCs	D
1611	Highway and Street Construction	Sedimentation	B2
4212	Local Trucking, without Storage	VOCs	D
3599	Machinery, Except Electrical Manufacturing	inorganics, VOCs	B
"	"	"	D
3999	Manufacturing Industries, nec	inorganics, VOCs	B
"	"	"	D
6515	Mobile Home Park	Sanitary wastes, Fertilizers	A
"	"	"	B
"	"	"	B1
"	"	"	B*
1542	Nonresidential Construction	Sedimentation	B2
1389	Oil and Gas Field services	Oil, Salt Water	B
"	"	"	C
7384	Photofinishing Laboratory	NA	B
"	"	"	D
3444	Sheet Metal Work Manufacturing	Metals and TSS, VOCs and metal etch	B
3993	Signs and Advertising Display Manufacturing	inorganics, VOCs	B
"	"	"	D

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
1521	Single-family Housing Construction	Oil, Paint, Pesticides, Fertilizers	A
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C
3559	Special Industries Machinery Manufacturing	inorganics, VOCs	B
"	"	"	D
2439	Structural Wood members Manufacturing	TSS, VOCs	B
"	"	"	D
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	B
"	"	"	D
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	A
"	"	"	B
2434	Wood Kitchen Cabinets Manufacturing	TSS, VOCs	B
"	"	"	D
752	Animal Specialty Services	Sanitary, fertilizers	A
"	"	"	B
"	"	"	B1
"	"	"	B2

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
752	Animal Specialty Services	Sanitary, fertilizers	B*
2759	Commercial Printing NEC	Inorganics, VOCs, Semi volatiles	B
"	"	"	C
"	"	"	D
2752	Commercial Printing–Lithographic	Inorganics, VOCs, Semi volatiles	B
"	"	"	C
"	"	"	D
5083	Farm and Garden Machinery	inorganics	B
2711	Newspapers Publishing and Printing	Inorganics, VOCs, Semi volatiles	B
"	"	"	C
"	"	"	D
2048	Prepared Feeds For Animals and Fowls	Sanitary, Nitrates, phosphorous and pesticides	A
"	"	"	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C*
5561	Recreational vehicle sales and repair	Inorganics	B
4953	Refuse Systems	ALL	A

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
4953	Refuse Systems	ALL	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C
"	"	"	C*
"	"	"	D
7699	Repair Services, Nec	inorganics	B

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Protection Measures:

The Protection Measures section shows water quality protection measures for the Standard Industrial Classifications (SIC) identified in the assessment area.

Previous sections of this report are designed to show areas that Public Water Supplies (PWS) can focus on to improve the susceptibility of an assessment area. This section helps identify water quality protection measures that a PWS can use as guidance for implementing action for a potential contaminant site in the assessment area. It focuses on protection measures that can reduce the risk of contamination to the water supply.

This portion of the report only displays water quality protection measures for each type of SIC found in the assessment area. It does not display protection measures for each site in the assessment area because every SIC should have the same or similar water quality protection management practices. However, the protection measures listed are not associated with any Added Sources.

Protection Measures

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Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
3728	Aircraft Equipment Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	40 CFR 464 and State or federal Storm water pollution prevention regulations
7538	Auto Truck Repair Service	Inorganics, VOCs	Discharge to POTW. Manage oil products and used oil so that it is not in contact with water	40 CFR 442 and
7542	Car Wash	Inorganics, VOCs	Install and maintain sediment and grease traps where appropriate	40 CFR 442
211	Cattle Farm	Sanitary, Fertilizers TSS, pesticides, Erosion and sedimentation	Proper application of fertilizers and pesticides. Proper cleaning of equipment and disposal of chemicals. Maintain riparian areas along waterways and keep cattle out of these areas. Proper Waste Management and Grazing Management.	KDHE– Livestock Waste Management Section, KAR 28–16, KDA, County Soil Conservation District, NRCS
4939	Combination Utility Services, nec	Inorganics, VOCs	Maintain secondary containment for fuel storage and fueling areas. Maintain and inspect. Effect repairs promptly	NA
5541	Gasoline Service Station	Inorganics, VOCs	Maintain area to minimize fuel contamination	NA

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
1611	Highway and Street Construction	Sedimentation	Erosion and Sediment Control	KAR 28–16, KDHE
4212	Local Trucking, without Storage	VOCs	Discharge to a POTW	State or federal Storm water pollution prevention regulations
3599	Machinery, Except Electrical Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations
3999	Manufacturing Industries, nec	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations
6515	Mobile Home Park	Sanitary wastes, Fertilizers	Discharge to POTW. Minimize use of lawn chemicals	KAR 28–5
1542	Nonresidential Construction	Sedimentation	Erosion and Sediment Control	KAR 28–16, KDHE

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
1389	Oil and Gas Field services	Oil, Salt Water	Proper management of production wastes	KAR 28–41, 45, 40 CFR 435
7384	Photofinishing Laboratory	NA	Discharge to POTW. Recycle chemicals	CFR 40 459
3444	Sheet Metal Work Manufacturing	Metals and TSS, VOCs and metal etch	Minimize outdoor storage and control storm water runoff. Pre-treat process wastewater prior to discharge to POTW	40 CFR 464 and State or federal Storm water pollution prevention regulations
3993	Signs and Advertising Display Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	40 CFR 459 and State or federal Storm water pollution prevention regulations
1521	Single-family Housing Construction	Oil, Paint, Pesticides, Fertilizers	Proper cleaning and disposal of household hazardous waste. Proper storage, application, and clean up of pesticides and fertilizers	KAR 28–48, KDHE, KDEM
3559	Special Industries Machinery Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
2439	Structural Wood members Manufacturing	TSS, VOCs	Discharge of process waters to POTW. Minimize outdoor storage.	State or federal Storm water pollution prevention regulations
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	Discharge to POTW. Recycle where appropriate. Properly maintain oil product and waste. Manage paint and solvent wastes properly	NA
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	Discharge to POT	NA
2434	Wood Kitchen Cabinets Manufacturing	TSS, VOCs	Discharge of process waters to POTW. Minimize outdoor storage.	State or federal Storm water pollution prevention regulations
752	Animal Specialty Services	Sanitary, fertilizers	Collect and treat wastes.	NA
2759	Commercial Printing NEC	Inorganics, VOCs, Semi volatiles	Recycle chemicals where possible. Discharge to POTW	40 CFR 459 and State or federal Storm water pollution prevention regulations

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
2752	Commercial Printing–Lithographic	Inorganics, VOCs, Semi volatiles	Recycle chemicals where possible. Discharge to POTW	40 CFR 459 and State or federal Storm water pollution prevention regulations
5083	Farm and Garden Machinery	inorganics	Discharge to POTW	NA
2711	Newspapers Publishing and Printing	Inorganics, VOCs, Semi volatiles	Recycle chemicals where possible. Discharge to POTW	40 CFR 459 and State or federal Storm water pollution prevention regulations
2048	Prepared Feeds For Animals and Fowls	Sanitary, Nitrates, phosphorous and pesticides	Maintain animal feeding areas and feed storage areas to minimize contact with storm water. Collect and treat process wastes.	40 CFR 412 and State or federal Storm water pollution prevention regulations
5561	Recreational vehicle sales and repair	Inorganics	Discharge to a POTW. Store oils and lubricants properly	Discharge to a POTW. Store oils and lubricants properly
4953	Refuse Systems	ALL	Store wastes properly in order to minimize contact with storm water.	Maintain the lagoon or storage vessel properly. Control storm water run on and runoff to minimize contamination of storm water

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
7699	Repair Services, Nec	inorganics	Discharge to POTW	NA

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Assessment Analysis:

The Assessment Analysis section displays the numbers assigned to each contaminant of concern category for each question in the susceptibility analysis.

This analysis is based on a decision tree framework consisting of a series of yes/no questions. These questions consider the proximity of contaminant sources to the water supply intake, the type of contaminant, and the application of pollution prevention or water quality protection practices to sources of contamination. As the evaluator moves through the analytical framework, susceptibility points are accumulated based on the presence of contaminant sources in the assessment area.

After all the questions have been answered, the SLS is calculated for each contaminant of concern category. The SLS is determined by counting the number of contamination risk factors found to occur in the delineated assessment area and applying a multiplier to this number. Because the number of contaminant category risk factors is not equal, the multiplier is used to establish a common scale for the SLS of each contaminant category.

Assessment Analysis

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Ground Water Multiple Wells Analysis

A – Microbiological **B** – Inorganic Compounds
B* – Nitrates **C** – Synthetic Organic Compounds
C* – Pesticides **D** – Volatile Organic Compounds

No.	Question	Response	A	B	B*	C	C*	D
1	Is any well under the influence of surface water?	No	0	0	0	0	0	0
2	Do all PWS wells meet KS PWS water well construction standards?	Yes	0	0	0	0	0	0
3	Is any well less than 30 feet deep?	No	0	0	0	0	0	0
4	Is gravel pack within 20 feet of any well surface?	Yes	1	1	1	1	1	1
5	Does a PWS own or control all the areas around the wells?	No	1	1	1	1	1	1
6	Does Zone B consist entirely of native grass?	No	2	2	2	2	2	2
7	Is there a contaminated well in Zone B?	No	0	0	0	0	0	0
8	Is a class V UIC well present?	No	0	0	0	0	0	0
9	Are any commercial, industrial, or urban areas present in Zone B?	Yes	1	1	1	1	1	1
10	Does each industrial/commercial site and urban area have a water quality protection plan in place?	No	1	1	1	1	1	1
11	Are any non-farm home sites present in Zone B?	Yes	1	0	1	0	1	0
12	Do all the non-farm home sites have a water quality protection plan?	No	1	0	1	0	1	0
13	Are any farmsteads present in Zone B?	Yes	1	1	1	1	1	1
14	Do all farmsteads have a water quality protection plan?	No	1	1	1	1	1	1
15	Is there grazing livestock in Zone B?	Yes	1	0	1	0	0	0
16	Have all livestock producers implemented water quality protection measures?	No	1	0	1	0	0	0
17	Is there livestock confinement in Zone B?	Yes	1	1	1	0	1	0

No.	Question	Response	A	B	B*	C	C*	D
18	Is each confined animal feeding operation registered with KDHE?	Yes	0	0	0	0	0	0
19	Is there corn or grain sorghum production in Zone B?	Yes	0	0	1	0	1	0
20	Are corn/grain sorghum nutrient and pesticide management plans in use for each site?	No	0	0	1	0	1	0
21	Are any orchards present in Zone B?	No	0	0	0	0	0	0
22	Are orchard nutrient and pesticide management plans in use for each site?	Yes	0	0	0	0	0	0
23	Are there unsewered developments (concentrations of lagoons or septic systems) present in Zone B?	Yes	1	1	1	0	0	0
24	Is there a railroad or major highway in Zone B or C?	Yes	0	1	1	1	1	1
25	Is there oil production in Zone B or C?	Yes	0	1	0	1	0	1
26	Do coarse textured soils predominate Zones A, B and C?	No	0	0	0	0	0	0
27	Is an irrigation well located in Zone B or C?	Yes	0	1	1	1	1	1
28	Is a wastewater treatment facility in Zone B or C?	Yes	1	1	1	1	1	1
29	Is a solid waste landfill in Zone B or C?	No	0	0	0	0	0	0
30	Are there unplugged, abandoned water wells present in Zone C?	No	0	0	0	0	0	0
31	Are any commercial, industrial, or urban area present in Zone C?	Yes	1	1	1	1	1	1
32	Does each industrial/commercial site and urban area have a water quality protection plan in place?	No	1	1	1	1	1	1
33	Is there livestock confinement in Zone C?	Yes	1	1	1	1	1	0
34	Is each confined livestock facility registered with KDHE?	Yes	0	0	0	0	0	0
35	Do all the livestock producers have water quality protection measures in place?	Yes	0	0	0	0	0	0
36	Are cropland nutrient management plans in place?	No	0	0	1	0	0	0
37	Are cropland pesticide management plans in place?	No	0	0	0	0	1	0
38	Does a perennial stream flow into Zone C?	Yes	1	1	1	1	1	1
39	Are watershed water quality protection plans in place?	Yes	0	0	0	0	0	0

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Site Comments:

The Site Comments section lists all the comments that were added for the potential sources of contamination found in the assessment area.

Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding detail to the sites that can be referenced for more information.

This local information may include comments on potential contamination threats (or lack there of), local water quality protection initiatives, etc. Adding comments are optional and are mainly focused on sources in areas that could have the greatest impact on water supply if a spill or release occurred in the environment. It is left to the discretion of the PWS and/or source water assessment committee to add comments.

Site Comments

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Comments for Unregulated Sites

Potential Contaminant Site No.	Site Comments	Author
207639	TEST COMMENT FOR 207639	Derrick Beasley

Comments for Regulated Confined Animal Feeding Operations Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
Binder And Son Dairy	2001226	This is a small dairy facility with no groundwater monitoring.	Nicole Fisher
Ksu Agricultural Research Ctr.	2002504	This cattle livestock facility has no water quality protection plans.	Nicole Fisher

Comments for Regulated Hazardous Waste Sites

Did Not Receive Any Comments

Comments for Regulated Leaking Storage Tank Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
A A Coors	3000398	the site is closed from a diesel leak in 1991. No groundwater contamination was suspected.	Nicole Fisher
Dons 66	3000548	Tank removed	Mary Howes
Haliburton	3001017	the site is currently being monitored from a xylene leak in 1989. There are 2 PWS wells and 4 domestic water wells within .25 miles downgradient of the leak.	Nicole Fisher
Home Oil Supply	3000146	The site is active from a gasoline leak in 1998. Low levels of VOC's are present in the groundwater.	Nicole Fisher
Karst Well Drilling	3001140	The site is active from a gasoline leak in 1995. Groundwater pollution did occur.	Nicole Fisher
Mr Quick Mini Mart	3000600	The site is currently being monitored from a gasoline leak in 1992. There are 2 PWS wells and 3 domestic water wells within .25 miles downgradient of the leak.	Nicole Fisher
Speedy Lube Oil	3001200	The site is closed; no leakage was detected.	Nicole Fisher

Comments for Regulated Identified Contaminated Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
MIDWEST ENERGY, INC.	7000896	The soil was contaminated with mercury and the contamination has been resolved.	Nicole Fisher
PERMIAN OIL	7000888	The soil and groundwater was contaminated with VOC's and observation wells were established in 1986.	Nicole Fisher
WEST 8TH STREET (HAYS WELLS – 20,27,28)	7000892	Soil, groundwater, PWS, and private wells were contaminated with VOC from an unknown source. For more information please contact Robert Jurgens (785) 291–3250	Nicole Fisher

Comments for Regulated Solid Waste Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
City of Hays	5000769	This solid waste facility is used for composting materials. No groundwater monitoring is required.	Nicole Fisher

Comments for Regulated Waste Water Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
KDHE/BER (DRY CLEANING TRUST FUND) HAYS	6000891	This facility frequently discharges water with contaminants that are within the recommended levels.	Nicole Fisher
ROME CORPORATION / WESTERN WELL SERVICE	6000888	This facility uses non-discharging lagoons.	Nicole Fisher

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Added Site Comments:

The Added Site Comments section lists the comments for why sites were added as a potential source of contamination found to the assessment area.

Added Site Comments

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Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
Fuel, grain and feed and hay storage	9000651	This information was obtained from the Wellhead Protection Plan.	Nicole Fisher
dryland wheat field	9000646	This information was obtained from the Wellhead Protection Plan.	Nicole Fisher
football field	9000650	This information was obtained from the Wellhead Protection Plan.	Nicole Fisher
oil and gas wells	9000648	This information was obtained from the Wellhead Protection Plan.	Nicole Fisher
pastureland with stock cattle	9000649	This information was obtained from the Wellhead Protection Plan.	Nicole Fisher
rural residence	9000617	on-site wastewater	Dale Wing
rural residence	9000618	on-site wastewater	Dale Wing
rural residence	9000619	on-site wastewater	Dale Wing
rural residence	9000620	on-site wastewater	Dale Wing
rural residence	9000622	on-site wastewater	Dale Wing

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
rural residence	9000623	on-site wastewater	Dale Wing
rural residence	9000624	on-site wastewater	Dale Wing
rural residence	9000625	on-site wastewater	Dale Wing
rural residence	9000626	on-site wastewater	Dale Wing
rural residence	9000630	on-site wastewater	Dale Wing
rural residence	9000632	on-site wastewater	Dale Wing
rural residence	9000633	on-site wastewater	Dale Wing
rural residence	9000634	on-site wastewater	Dale Wing
underground gas oil pipelines	9000647	This information was obtained from the Wellhead Protection Plan.	Nicole Fisher
wastewater treatment facility	9000635	on-site wastewater treatment	Dale Wing

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Analysis Question Comments:

The Analysis Question Comments section lists all the comments that were added during analysis portion of the assessment, in which a series of yes/no questions were asked.

Evaluators have the option to add comments to questions to clarify why a response was given or to give more details to a question. Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding clarification and details that could not be identified with a simple yes or no response.

Analysis Question Comments

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Comments for Analysis Questions

Analysis Question	Question Comments	Author
N/A or Unknown	Water supply 001 is located north of the highway/railroad on this map. this is not correct the water supply is located close to supply 002 on the south side of the highway.	Dale Wing